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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/527,443

**Applicant(s)**

COWBURN, RUSSELL PAUL

**Examiner**

STEPHEN SANDERS

**Art Unit**

2139

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 March 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 65-128 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 65-128 is/are rejected.  
7) ☒ Claim(s) 96 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SG/IC)  
Paper No(s)/Mail Date See Continuation Sheet  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :03/10/2005; 06/06/2005; 05/25/2007.

### **DETAILED ACTION**

This is in response to Application/Control Number: 10/527443 filed on March 10, 2005 in which claims 65-128 are presented for examination.

#### **Status of Claims:**

Claims 65-128 are pending, in which claim 65, 84, 97, 112, and 127 are in independent form. Claims 65-71, 84-85, 97-98, 112-113, and 127 are rejected under 35 U.S.C. 102(b). Claims 72-83, 86-96, 99-111, 114-126, and 128 are rejected under 35 U.S.C. 103(a).

#### ***Claim Objections***

1. Claim 96 is objected to because of the following informalities: Claim 96 recites "...claims 27 to 30 ..." instead of the correct numbering of "...claims 91 to 94 ...". It is suggested that their recitation be changed to "... claims 91 to 94 ...". Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 65-71, 84-85, 97-98, 112-113, and 127 are rejected under 35 U.S.C. 102(b) as being anticipated by Gambino et al (5,538,803) hereinafter Gambino.

As to claim 65, the following is taught: "A security device comprising at least one magnetic element (Gambino: Abstract; column 1, lines 41-52), wherein said at least one magnetic element is responsive to an applied magnetic field to provide a characteristic response (Gambino: column 1, lines 35-40; column 4, lines 24-29), wherein said at least one magnetic element is made from a material that comprises structural defects that cause brittle mode switching in which the growth of a single magnetic domain dominates the change in magnetisation of a respective magnetic element (Gambino: column 4, lines 4-23).

As to claim 66, the following is taught: "The security device of claim 65, wherein said at least one magnetic element is supported by a substrate (Gambino: See drawing "Substrate 6"; column 1, lines 54-60).

As to claim 67, the following is taught: "The security device of claim 66, wherein said at least one magnetic element is supported on said substrate (Gambino: column 1, lines 61-65; column 2, lines 12-16).

As to claim 68, the following is taught: "The security device of claim 65, wherein said at least one magnetic element is responsive to said applied magnetic field to switch the magnetisation or magnetic polarisation of said at least one magnetic element (Gambino: column 4, lines 4-20).

As to claim 69, the following is taught: "The security device of claim 66, wherein said at least one magnetic element is made from a magnetically soft material (Gambino: column 4, lines 4-20).

As to claim 70, the following is taught: "The security device of claim 69, wherein said at least one magnetic element comprises a magnetically soft material selected from one or more of: nickel, iron, cobalt and alloys thereof with each other or silicon, such as nickel iron alloy, cobalt iron alloy, iron silicon alloy or cobalt silicon alloy (Gambino: column 4, lines 6-14).

As to claim 71, the following is taught: "The security device of claim 69, wherein said magnetically soft material is a permalloy material (Gambino: column 4, lines 6-14).

As to claim 84, the following is taught: "A method of manufacturing a security device, comprising: providing at least one magnetic element comprising structural defects, wherein said at least one magnetic element provides a brittle mode switching characteristic response in response to an applied magnetic field (Gambino: column 3, lines 20-30; column 8 line 6 to column 9, line 31).

As to claim 85, the following is taught: "The method of claim 84, comprising providing said at least one magnetic element on a substrate (Gambino: see drawing "Substrate 6"; column 1, lines 54-60).

As to claim 97, the following is taught: "A system for reading a security device, comprising:

magnetic field generation system for applying a magnetic field to a security device (Gambino: Abstract; column 4, lines 28-44); and

a detection system for measuring one or more parameters representative of a brittle mode switching measured characteristic response of said security device in response to said magnetic field (Gambino: column 4, lines 4-23; column 6, lines 42-46),

wherein said system is operable to compare said one or more parameters representative of a brittle mode switching measured characteristic response to one or more respective parameters of a brittle mode switching premeasured characteristic response to determine whether respective measured and premeasured parameters are substantially equivalent (Gambino: column 4, lines 4-23).

As to claim 98, the following is taught: "The system of claim 97, wherein the magnetic field generation system is operable to apply a time varying magnetic field to a security device (Gambino: column 6, lines 15-25).

As to claim 112, the following is taught: "A method for reading a security device, comprising: applying a magnetic field to a security device (Gambino: Abstract; column 4, lines 28-44); measuring one or more parameters representative of a brittle mode switching measured characteristic response of said security device in response to said

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magnetic field (Gambino: column 4, lines 4-23; column 6, lines 42-46); and comparing said one or more parameters representative of a brittle mode switching measured characteristic response to one or more respective parameter(s) of a brittle mode switching premeasured characteristic response to determine whether respective measured and premeasured parameters are substantially equivalent (Gambino: column 4, lines 4-23).

As to claim 113, the following is taught: "The method of claim 112, comprising applying a time varying magnetic field to a security device (Gambino: column 6, lines 15-25).

As to claim 127 the following is taught: "A product comprising a security device comprising at least one magnetic element (Gambino: Abstract; column 1, lines 41-52), wherein said at least one magnetic element is responsive to an applied magnetic field to provide a characteristic response (Gambino: column 1, lines 35-40; column 4, lines 24-29), wherein said at least one magnetic element is made from a material that comprises structural defects that cause brittle mode switching in which the growth of a single magnetic domain dominates the change in magnetisation of a respective magnetic element (Gambino: column 4, lines 4-23).



***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 72-83, 86-96, 108-111, 123-126, and 128 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gambino (5,538,803) in view of Litman (6,053,406).

As to claim 72, the following is taught: "The security device of claim 65, wherein said at least one magnetic element is substantially wire-shaped or flattened wire shaped". Gambino teaches the security device of claim 65 (as shown above) but fails to teach the shapes of the magnetic element. However, Litman teaches this art (Litman: see Figure 4; column 6, lines 6-10). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 73, the following is taught: "The security device of claim 65, wherein said at least one magnetic element is backed by a light reflective layer. Gambino teaches the security device of claim 65 (as shown above) but fails to teach the a light reflective layer. However, Litman teaches this art (Litman: column 13, lines 13-19). In

view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 74, the following is taught: "The security device of claim 65, wherein said at least one magnetic element is provided proximal a reduced light reflectivity portion of said security device. Gambino teaches the security device of claim 65 (as shown above) but fails to teach the a light reflective layer. However, Litman teaches this art (Litman: column 28, lines 45-50). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 75, the following is taught: "The security device of claim 65, comprising a plurality of said at least one magnetic elements. Gambino teaches the security device of claim 65 (as shown above) but fails to teach the a plurality of magnetic elements. However, Litman teaches this art (Litman: column 20, lines 24-36). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors.

Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 76, the following is taught: "The security device of claim 75, wherein said plurality of magnetic elements is arranged to provide a linear pattern. Gambino teaches the security device of claim 75 (as shown above) but fails to teach the patterns of the magnetic elements. However, Litman teaches this art (Litman: column 7, lines 44-58). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 77, the following is taught: "The security device of claim 75, wherein said plurality of magnetic elements is arranged to provide a two-dimensional pattern. Gambino teaches the security device of claim 75 (as shown above) but fails to teach the patterns of the magnetic elements. However, Litman teaches this art (Litman: column 24, lines 46-59). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 78, the following is taught: "The security device of claim 76, wherein said pattern encodes an identifier. Gambino teaches the security device of claim 76 (as shown above) but fails to teach a pattern encoded identifier of the magnetic elements. However, Litman teaches this art (Litman: column 12, lines 52-59; column 15, lines 55-59; column 18, lines 15-29). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 79, the following is taught: "The security device of claim 65, further comprising a unique identifier incorporated therewith. Gambino teaches the security device of claim 65 (as shown above) but fails to teach the incorporation of a unique identifier. However, Litman teaches this art (Litman: column 18, lines 15-29). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 80, the following is taught: "The security device of claim 79, wherein said unique identifier is provided by way of one or more of: an optically readable bar code; one or more optical indicia; a magnetically encoded identifier; and an electronic

identifier. Gambino teaches the security device of claim 79 (as shown above) but fails to teach optically readable bar coding techniques, optical indicia, and magnetically and electronically encoded identifiers. However, Litman teaches this art (Litman: column 5, lines 10-16; column 10, lines 1-8; column 13, lines 13-19). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 81, the following is taught: "The security device of claim 80, mounted upon a smart-card, wherein said electronic identifier is provided by a smart-card chip provided on said smart-card. Gambino teaches the security device of claim 80 (as shown above) but fails to teach smart-card chip provided identifiers. However, Litman teaches this art (Litman: column 1, lines 36-48; column 11, lines 10-16; column 33, line 65 to column 34 line 16). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 82, the following is taught: "The security device of claim 65, wherein premeasured characteristic response information representing one or more measurable

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parameters of said characteristic response is stored on said security device. Gambino teaches the security device of claim 65 (as shown above) but fails to teach premeasured characteristic response storage. However, Litman teaches this art (Litman: column 8, line 52 to column 9, line 16; column 13, lines 19-29). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 83, the following is taught: "The security device of claim 82, wherein said premeasured characteristic response information is in encrypted form. Gambino teaches the security device of claim 82 (as shown above) but fails to teach premeasured encrypted characteristic response storage. However, Litman teaches this art (Litman: column 8, line 52 to column 9, line 16; column 15, lines 55-63; column 26, lines 10-15). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 86, the following is taught: "The method of claim 84, comprising forming said at least one magnetic element using a lift-off or wet etching process. Gambino teaches the method of claim 84 (as shown above) but fails to teach the use of

a manufacturing etching process. However, Litman teaches this art (Litman: column 2, lines 53-57; column 3, lines 13-19). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 87, the following is taught: "The method of claim 84, comprising forming said at least one magnetic element using an ion beam etching process. Gambino teaches the method of claim 84 (as shown above) but fails to teach the use of a manufacturing etching process. However, Litman teaches this art (Litman: column 2, lines 53-57; column 3, lines 13-19). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 88, the following is taught: "The method of claim 84, comprising measuring the magnitude(s) of one or more magnetic parameters of said at least one magnetic element. Gambino teaches the method of claim 84 (as shown above) but fails to teach the use of magnetic parameter measurements. However, Litman teaches this art (Litman: column 8, line 52 to column 9, line 16; column 13, lines 19-29; column 18,

lines 3-14). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 89, the following is taught: "The method of claim 88, comprising measuring one or more of coercivity and jitter values. Gambino teaches the method of claim 88 (as shown above) but fails to teach the use of magnetic parameter measurements. However, Litman teaches this art (Litman: column 8, line 52 to column 9, line 16; column 13, lines 19-29; column 22, lines 24-26). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 90, the following is taught: "The method of claim 88, comprising using the measured magnitude(s) of said one or more magnetic parameters to represent premeasured characteristic response information. Gambino teaches the method of claim 88 (as shown above) but fails to teach the use of premeasured characteristic response information. However, Litman teaches this art (Litman: column 8, line 52 to column 9, line 16; column 13, lines 19-29; column 22, lines 24-26). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art



at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 91, the following is taught: "The method of claim 90, comprising encrypting said premeasured characteristic response information. Gambino teaches the method of claim 90 (as shown above) but fails to teach the use of premeasured characteristic response information. However, Litman teaches this art (Litman: column 8, line 52 to column 9, line 16; column 15, lines 55-63; column 26, lines 10-15). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 92, the following is taught: "The method of claim 90, comprising storing said premeasured characteristic response information in encrypted or unencrypted form on said security device. Gambino teaches the method of claim 90 (as shown above) but fails to teach the use of premeasured characteristic response information. However, Litman teaches this art (Litman: column 8, line 52 to column 9, line 16; column 15, lines 55-63; column 26, lines 10-15). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are

not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 93, the following is taught: "The method of claim 90, comprising storing said premeasured characteristic response information in encrypted or unencrypted form in a storage medium remote from said security device. Gambino teaches the method of claim 90 (as shown above) but fails to teach the use and storage of premeasured characteristic response information. However, Litman teaches this art (Litman: column 8, line 52 to column 9, line 16; column 15, lines 55-63; column 26, lines 10-15; column 26, lines 19-25). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 94, the following is taught: "The method of claim 93, comprising storing said premeasured characteristic response information in encrypted or unencrypted form in a database. Gambino teaches the method of claim 93 (as shown above) but fails to teach the use and database storage of premeasured characteristic response information. However, Litman teaches this art (Litman: column 8, line 52 to column 9, line 16; column 9, lines 40-51; column 15, lines 55-63; column 26, lines 10-15; column 26, lines 19-25). In view of Litman's teachings, it would have been obvious

to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 95, the following is taught: "The method of claim 84, further comprising providing said security device with a unique identifier. Gambino teaches the method of claim 84 (as shown above) but fails to teach the use of unique identification. However, Litman teaches this art (Litman: column 18, lines 15-29). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 96, the following is taught: "The method of claim 95 when dependant upon any one of claims 27 to 30, comprising storing a representation of said unique identifier in association with said premeasured characteristic response information. Gambino teaches the method of claim 95 (as shown above) but fails to teach the use and storing of the unique identification. However, Litman teaches this art (Litman: column 8, line 52 to column 9, line 16; column 15, lines 55-63; column 18, lines 15-29; column 26, lines 10-15). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these

additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 108, the following is taught: "The system of claim 97, further operable to determine said one or more respective parameters of the premeasured characteristic response by reading said one or more parameters from said security device. Gambino teaches the method of claim 97 (as shown above) but fails to teach the determining of magnetic parameters. However, Litman teaches this art (Litman: column 8, line 52 to column 9, line 16; column 13, lines 19-29). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 109, the following is taught: "The system of claim 97, further operable to determine said one or more respective parameters of the premeasured characteristic response by reading said one or more parameters from a database. Gambino teaches the method of claim 97 (as shown above) but fails to teach the determining of database stored magnetic parameters. However, Litman teaches this art (Litman: column 8, line 52 to column 9, line 16; column 9, lines 40-51; column 15, lines 55-63; column 26, lines 10-15; column 26, lines 19-25). In view of Litman's teachings, it

would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 110, the following is taught: "The system of claim 109, wherein said database is remotely located from said detection system. Gambino teaches the method of claim 109 (as shown above) but fails to teach the locating of detection system database. However, Litman teaches this art (Litman: column 8, line 52 to column 9, line 16; column 15, lines 55-63; column 26, lines 10-15; column 26, lines 19-25). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 111, the following is taught: "The system of claim 97, further operable to decrypt premeasured characteristic response information where it is read or provided in encrypted form. Gambino teaches the method of claim 97 (as shown above) but fails to teach the determining and use of premeasured characteristic response information. However, Litman teaches this art (Litman: column 8, line 52 to column 9, line 16; column 15, lines 55-63; column 26, lines 10-15). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time

the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 123 the following is taught: "The method of claim 112, comprising determining said respective one or more parameters of the premeasured characteristic response by reading said one or more parameters from said security device. Gambino teaches the method of claim 112 (as shown above) but fails to teach the determining and use of magnetic parameter measuring. However, Litman teaches this art (Litman: column 8, line 52 to column 9, line 16; column 13, lines 19-29). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 124 the following is taught: "The method of claim 112, comprising determining said one or more respective parameters of the premeasured characteristic response by reading said one or more parameters from a database. Gambino teaches the method of claim 112 (as shown above) but fails to teach the determining and use of database stored magnetic parameter measurements. However, Litman teaches this art (Litman: column 8, line 52 to column 9, line 16; column 9, lines 40-51; column 15, lines 55-63; column 26, lines 10-15; column 26, lines 19-25). In view of Litman's teachings, it

would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 125 the following is taught: "The method of claim 124, comprising accessing a database remotely located from said detection system. Gambino teaches the method of claim 124 (as shown above) but fails to teach the locating of detection system database. However, Litman teaches this art (Litman: column 8, line 52 to column 9, line 16; column 15, lines 55-63; column 26, lines 10-15; column 26, lines 19-25). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 126 the following is taught: "The method of claim 112, further comprising decrypting premeasured characteristic response information where it is read or provided in encrypted form. Gambino teaches the method of claim 112 (as shown above) but fails to teach the determining and use of premeasured characteristic response information. However, Litman teaches this art (Litman: column 8, line 52 to column 9, line 16; column 15, lines 55-63; column 26, lines 10-15). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time

the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 128 the following is taught: "The product of claim 127, comprising one or more of: a document; a passport; an identity card; a compact disc; a digital versatile disc; a software product; packaging; an item of clothing; an item of footwear; a smart-card; a credit or bank card; a cosmetic item; an engineering part; an accessory; and any other goods and/or items of commerce, whether manufactured or otherwise. Gambino teaches the method of claim 127 (as shown above) but fails to teach the various products uses of the claims. However, Litman teaches this art (Litman: Abstract; column 1, lines 35-61). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

6. Claims 99-105, and 114-120 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gambino (5,538,803) in view of Schramm, Jr. et al (5,742,036) hereinafter Schramm.



As to claim 99, the following is taught: "The system of claim 97, wherein a light beam is used to interrogate said security device. Gambino teaches the method of claim 97 (as shown above) but fails to teach the types of interrogation techniques. However, Schramm teaches this art (Schramm: column 5, lines 53-65). In view of Schramm's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 100, the following is taught: "The system of claim 97, wherein said light beam is a visible or near-infrared beam produced by a laser diode. Gambino teaches the method of claim 97 (as shown above) but fails to teach the types of interrogation techniques. However, Schramm teaches this art (Schramm: column 2, lines 10-15). In view of Schramm's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 101, the following is taught: "The system of claim 97, wherein said parameters represent one or more of coercivity and jitter values. Gambino teaches the method of claim 97 (as shown above) but fails to teach the use of magnetic parameter measurements. However, Schramm teaches this art (Schramm: column 4, lines 57-

63). In view of Schramm's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 102, the following is taught: "The system of claim 99, wherein said detection system incorporates magneto-optic Kerr effect detection apparatus for detecting changes induced in said light beam by magnetic elements of said security device. Gambino teaches the method of claim 99 (as shown above) but fails to teach the magneto-optic Kerr effect apparatus. However, Schramm teaches this art (Schramm: column 5, lines 55-65). In view of Schramm's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 103, the following is taught: "The system of claim 102, wherein said magneto-optic Kerr effect detection apparatus is configured to operate in transverse mode. Gambino teaches the method of claim 102 (as shown above) but fails to teach the magneto-optic Kerr effect apparatus and used configurations. However, Schramm teaches this art (Schramm: column 5, lines 53-65). In view of Schramm's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the

invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 104, the following is taught: "The system of claim 99, further operable to deflect said light beam across the surface of said security device. Gambino teaches the method of claim 99 (as shown above) but fails to teach the types of interrogation techniques. However, Schramm teaches this art (Schramm: column 5, lines 53-65). In view of Schramm's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 105, the following is taught: "The system of claim 99, further operable to read a unique identifier from said security device. Gambino teaches the method of claim 99 (as shown above) but fails to teach the use and storing of the unique identification. However, Schramm teaches this art (Schramm: Abstract: column 5, lines 53-65). In view of Schramm's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 114, the following is taught: "The method of claim 112, wherein measuring of one or more parameters representative of a measured characteristic response of said security device in response to said magnetic field comprises measuring one or more of coercivity and jitter values. Gambino teaches the method of claim 112 (as shown above) but fails to teach the use of magnetic parameter measurements. However, Schramm teaches this art (Schramm: column 4, lines 57-63). In view of Schramm's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 115, the following is taught: "The method of claim 112, comprising interrogating said security device using a light beam. Gambino teaches the method of claim 112 (as shown above) but fails to teach the types of interrogation techniques. However, Schramm teaches this art (Schramm: column 5, lines 53-65). In view of Schramm's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 116, the following is taught: "The method of claim 112, comprising operating a laser to produce a visible or near-infrared beam. Gambino teaches the method of claim 112 (as shown above) but fails to teach the types of interrogation techniques. However, Schramm teaches this art (Schramm: column 2, lines 10-15). In view of Schramm's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 117, the following is taught: "The method of claim 115, comprising detecting changes induced in said light beam by magnetic elements of said security device using the magneto-optic Kerr effect. Gambino teaches the method of claim 115 (as shown above) but fails to teach the magneto-optic Kerr effect. However, Schramm teaches this art (Schramm: column 5, lines 55-65). In view of Schramm's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 118, the following is taught: "The method of claim 117, comprising using the magneto-optic Kerr effect transverse mode. Gambino teaches the method of claim 117 (as shown above) but fails to teach the magneto-optic Kerr effect. However,

Schramm teaches this art (Schramm: column 5, lines 53-65). In view of Schramm's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 119 the following is taught: "The method of claim 115, comprising deflecting said light beam across the surface of said security device. Gambino teaches the method of claim 115 (as shown above) but fails to teach the types of interrogation techniques. However, Schramm teaches this art (Schramm: column 5, lines 53-65). In view of Schramm's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 120 the following is taught: "The method of claim 112, comprising reading a unique identifier from said security device. Gambino teaches the method of claim 112 (as shown above) but fails to teach the incorporation of a unique identifier. However, Schramm teaches this art (Schramm: Abstract: column 5, lines 53-65). In view of Schramm's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors.

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Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

7. Claims 106-107, and 121-122 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gambino (5,538,803) in view of Schramm (5,742,036) and in further view of Litman (6,053,406).

As to claim 106, the following is taught: "The system of claim 105, wherein said unique identifier is identified by recognising a pattern of magnetic elements supported by said security device. Gambino and Schramm teach the method of claim 105 (as shown above) but fail to teach pattern structure and recognition. However, Litman teaches this art (Litman: column 18, lines 15-29). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 107, the following is taught: "The system of claim 105, wherein said unique identifier is identified by reading one or more of: an optically readable bar code; one or more optical indicia; a magnetically encoded identifier; and an electronic identifier. Gambino and Schramm teach the method of claim 105 (as shown above) but fail to teach identifier pattern structure and recognition. However, Litman teaches this

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art (Litman: column 5, lines 10-16; column 10, lines 1-8; column 13, lines 13-19). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 121 the following is taught: "The method of claim 120, comprising identifying said unique identifier by recognising a pattern of magnetic elements supported by said security device. Gambino and Schramm teach the method of claim 120 (as shown above) but fail to teach identifier pattern structure and recognition. However, Litman teaches this art (Litman: column 18, lines 15-29). In view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

As to claim 122 the following is taught: "The method of claim 120, comprising identifying said unique identifier by reading one or more of; an optically readable bar code; one or more optical indicia; a magnetically encoded identifier; and an electronic identifier. Gambino and Schramm teach the method of claim 120 (as shown above) but fail to teach identifier pattern structure and recognition. However, Litman teaches this art (Litman: column 5, lines 10-16; column 10, lines 1-8; column 13, lines 13-19). In



view of Litman's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ these additional factors. Although these teachings are not recited by Gambino, one would be motivated to use them to improve the security device to prevent unauthorized copying of products.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN SANDERS whose telephone number is (571)270-5308. The examiner can normally be reached on M - F; 7:30a.m. - 5:00p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine L. Kincaid can be reached on 571-272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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